

(No Model.)

B. REIN.
SAD IRON.

No. 530,653.

Patented Dec. 11, 1894.

Fig. 1

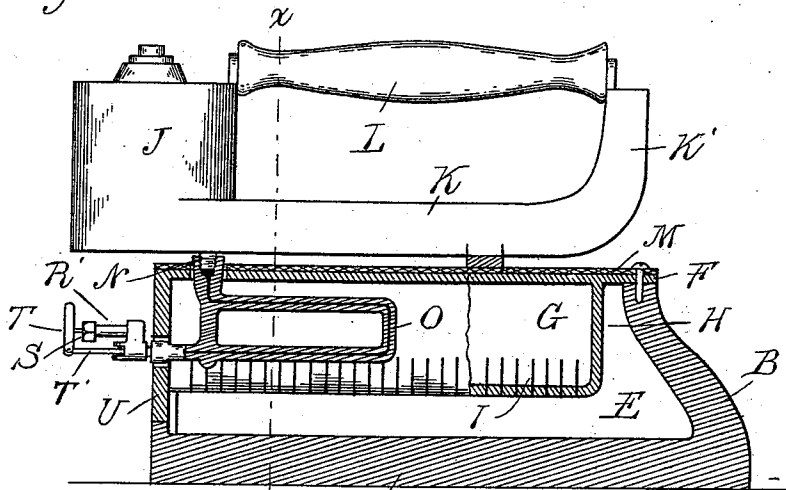


Fig. 2

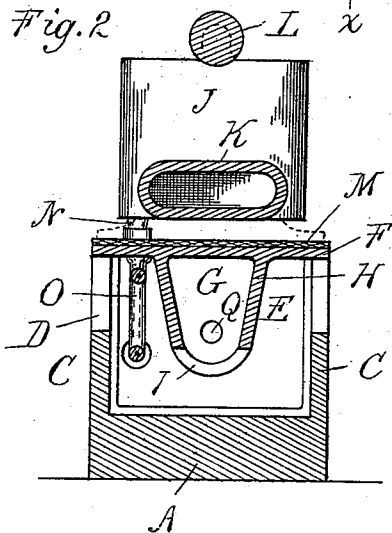
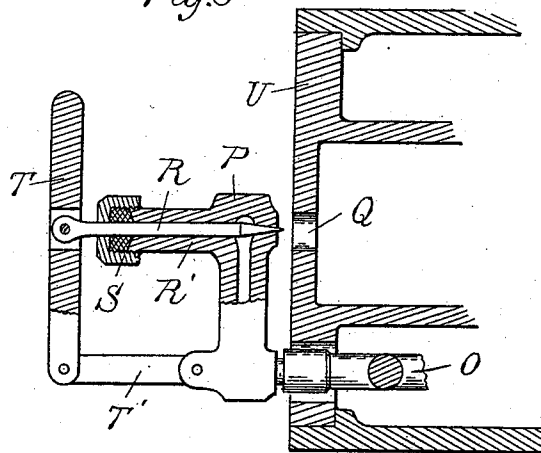


Fig. 3



Witnesses:
A. L. Kobby
M. W. McPherson

Inventor:
Bernard Rein
By *Wm. C. Mudgett* Esq. Attys.

UNITED STATES PATENT OFFICE.

BERNARD REIN, OF DETROIT, MICHIGAN, ASSIGNOR TO THE UNION HEATER
SUPPLY COMPANY, OF SAME PLACE.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 530,653, dated December 11, 1894.

Application filed December 14, 1893. Serial No. 493,671. (No model.)

To all whom it may concern:

Be it known that I, BERNARD REIN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in a Sad-Iron, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction, arrangement and combination of the various parts, whereby the cost of manufacture is cheapened and the efficiency of the device is increased, all as more fully hereinafter described.

In the drawings, Figure 1 is a sectional elevation of a sad iron embodying my invention. Fig. 2 is a cross section on line *x x* of Fig. 1. Fig. 3 is a horizontal section centrally through the needle valve showing its construction and connections.

A is the base of the iron. B is the front wall thereof and preferably inclined backward, as shown in Fig. 1.

C are the side walls preferably provided with the usual perforations D, at or near the top to admit of the escape of the products of combustion from the combustion chamber E formed within. The top of the combustion chamber is formed by a plate F which is secured to the base by a suitable bolt or pin passing through its forward end and entering the top of the wall B.

G is a superheating chamber for the gases to be burned, preferably formed by the casing H depending from the plate F and preferably integral therewith. The casing H tapers from its upper edge toward the bottom and the bottom is preferably curved, as shown, and provided with suitable slots I through which the gases may escape into the combustion chamber for burning.

J is the tank which has the forward extending foot K, having the upturned end K'.

L is the handle between the tank body proper and the arm K' of the foot K. The tank is secured to the top of the iron in any

suitable manner and I preferably arrange over the top a sheet of insulating material M, such as asbestos fiber or asbestos paper.

From the bottom of the tank at any suitable point I form a discharge nipple N which connects with the generating pipe O, having forward and back passages, or sections arranged one directly over the other as shown and located in the combustion chamber. This pipe communicates with and supports the valve casing P, the discharge from which is opposite the feed aperture Q in the rear wall of the super-heating chamber.

R is the needle valve which slidably engages through a nipple R' of the valve casing, being provided with a suitable packing nut S, and at its outer end is provided with an actuating hand lever T for sliding the valve to and from its seat, the outer end of the lever T being pivotally secured to a link T' which is pivoted on the valve casing, as shown in Fig. 3.

The casing H has formed integral with it the flanges U which form the rear wall of the combustion chamber and is an integral extension of the plate F, the same fitting in suitable seats formed in the sides and bottom of the base as shown in Figs. 2 and 3.

The operation is as follows: The iron being suitably heated the valve is opened and the fluid, preferably gasoline, will pass from the tank J into the pipe O where it becomes heated and changed to vapor and then the vapor passes through the valve into the superheating chamber and out through the apertures I into the combustion chamber where it is ignited.

What I claim as my invention is—

In a self heating sad iron, the combination of the base having marginal flanges, a top plate fitting thereon and forming beneath a combustion chamber, the casing H depending from the top plate, slotted at the lower edge to form the burner, the end wall U formed integral with the top plate, and forming the rear wall for the burner and combus-

tion chamber the valve casing at the end of
the burner, the nipple R' thereon, the needle
valve R sliding therein, the lever T for actu-
ating the valve, the link T' pivoted to the
5 valve casing and forming the fulcrum for the
lever, the tank, the supply pipe therefrom,
the generating pipe in the combustion cham-
ber beside the burner, and a supporting con-

nection between the generating pipe and the
valve casing, substantially as described. 10

In testimony whereof I affix my signature in
presence of two witnesses.

BERNARD REIN.

Witnesses:

M. B. O'DOHERTY,
O. F. BARTHEL.